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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
AHLUWALIA, NAVNEET K	

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,152	LIU ET AL.	
	Examiner	Art Unit	
	Navneet K. Ahluwalia	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *09/2004,12/2004,06/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The application has been examined. Claims 1 – 50 are pending in this office action.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 20 – 38 and 42 – 44 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 20 – 38 and 42 – 44 are rejected because the language of claims in view of the definition of the computer readable medium carrying instructions from the detailed description of the embodiments (Pages 15 – 16 paragraphs 0040 – 0042) recites transmission media, carrier waves and signals which are not considered as tangible and do not form the basis of statutory subject matter under 35 U.S.C. 101.

4. To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (non-statutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four categories of invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 – 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Fernandez et al. ('Fernandez' herein after) (US 6,785,673 B1).

With respect to claims 1 and 20,

Fernandez discloses a method comprising the computer-implemented steps of: detecting that a portion of a plan to service a request for data will cause a first execution unit that will perform said portion to generate XML data for use by a second execution unit (Figures 6, 7, Fernandez); generating information to send to said first execution unit to cause said first execution unit to perform said portion of said plan (column 37 lines 48 – 61, Fernandez); and annotating said information with an annotation (column 35 lines 64 – 67 and column 36 lines 25 – 35, Fernandez) that causes XML data generated by said first execution unit to be transformed to a canonical form for use by said second execution unit (column 28 lines 1 – 5, Fernandez).

With respect to claims 2 and 21,

Fernandez discloses the method of claim 1, wherein the step of generating information includes generating information that, prior to annotating said information, would cause said first execution unit to generate said XML data in a first form that cannot be used by said second execution unit, and wherein said canonical form is different from said first form (column 6 lines 61 – 67 and column 7 lines 1 – 19, Fernandez).

With respect to claims 3 and 22,

Fernandez discloses the method of claim 2, wherein said first form includes information to locate data that is stored in memory that is exclusive to said first execution unit, and wherein said information to locate data stored in said memory cannot be used by said second execution unit (column 7 lines 1 – 19, Fernandez).

With respect to claims 4 and 23,

Fernandez discloses the method of claim 1, wherein said request for data is a database query and said plan is a query plan (column 11 lines 31 – 36 and 58 – 64, Fernandez).

With respect to claims 5 and 24,

Fernandez discloses the method of claim 4, wherein said information is one or more database commands (column 12 lines 38 – 59, Fernandez).

With respect to claims 6 and 25,

Fernandez discloses the method of claim 1, wherein said annotation specifies a transformation operator (column 35 lines 31 – 48, Fernandez).

With respect to claims 7 and 26,

Fernandez discloses the method of claim 6, further comprising the computer-implemented steps of: executing said transformation operator, by said first execution unit, to transform XML data generated by said first execution unit to said canonical form (column 35 lines 64 – 67 and column 36 lines 25 – 35, Fernandez); and sending XML data that is transformed by said first execution unit to said second execution unit in said canonical form (column 28 lines 1 – 5, Fernandez).

With respect to claims 8 and 27,

Fernandez discloses the method of claim 6, wherein said annotation specifies arguments for said transformation operator, to specify said canonical form (column 35 lines 31 – 48, Fernandez).

With respect to claims 9 and 28,

Fernandez discloses the method of claim 1, further comprising the computer-implemented steps of: transforming, by said first execution unit, said XML data to said canonical form based on said annotation (column 35 lines 64 – 67 and column 36 lines

25 – 35, Fernandez).

With respect to claims 10 and 29,

Fernandez discloses the method of claim 1, wherein the step of annotating includes annotating said information with an operator to transform said XML data to a canonical form in which said XML data is serialized to represent particular data for a particular XML construct and is included in a serialized image that is sent to said second execution unit (column 1 lines 24 – 46, Fernandez).

With respect to claims 11 and 30,

Fernandez discloses the method of claim 1, wherein the step of annotating includes annotating said information with an operator to transform said XML data to a canonical form which includes an identifier of memory space where data is persistently stored, and wherein said data in said memory space is accessible by said second execution unit (column 33 lines 21 – 37, Fernandez).

With respect to claims 12 and 31,

Fernandez discloses the method of claim 1, wherein the step of annotating includes annotating said information with an operator to transform said XML data to a canonical form in which said XML data is compressed according to a particular compression form that said second execution unit is able to decompress (column 2 lines 16 – 59, Fernandez).

With respect to claims 13 and 32,

Fernandez discloses the method of claim 1, wherein said first execution unit and said second execution unit are different execution units that are executing, in parallel, work associated with servicing said request (column 18 lines 14 – 24, Fernandez).

With respect to claims 14 and 33,

Fernandez discloses the method of claim 1, wherein said first execution unit and said second execution unit are different execution units that are each executing, on different servers of a distributed database system, work associated with servicing said request (column 18 lines 14 – 24, Fernandez).

With respect to claims 15 and 34,

Fernandez discloses the method of claim 1, wherein the steps of detecting, generating and annotating are performed by a means that distributes work associated with servicing said request to said first execution unit and said second execution unit, and wherein said first execution unit and said second execution unit are different execution units that are each executing work associated with servicing said request (column 27 lines 59 – 67 and column 28 lines 1 – 5, Fernandez).

With respect to claims 16 and 35,

Fernandez discloses the method of claim 15, wherein said first execution unit and said second execution unit are each executing, on different data sources, work associated with servicing said request (Figures 1, 2 and 6 Fernandez).

With respect to claims 17 and 36,

Fernandez discloses the method of claim 15, wherein said means that distributes work comprises an application server (column 28 lines 1 – 5, Fernandez).

With respect to claims 18 and 37,

Fernandez discloses the method of claim 15, wherein said means that distributes work comprises an application that manages workload among multiple means for executing said work (Figures 1, 2 and 6 Fernandez).

With respect to claims 19 and 38,

Fernandez discloses the method of claim 1, further comprising the computer-implemented steps of: determining said canonical form from information that describes preferences of each of multiple execution units that performs work associated with servicing said request (column 28 lines 1 – 5, Fernandez).

With respect to claims 39 and 42,

Fernandez discloses a method for processing XML data, comprising the computer-implemented steps of: receiving information at a first execution unit to cause

said first execution unit to perform work associated with servicing a request for data (Figures 6, 7, Fernandez); wherein said information comprises an annotation that causes the XML data generated by said first execution unit to be transformed to a canonical form for use by a second execution unit; wherein said information, without said annotation, would cause said second execution unit to receive from said first execution unit XML data in a first form that cannot be used by said second execution unit (column 37 lines 48 – 61, Fernandez); transforming XML data generated by said first execution unit to said canonical form prior to providing said XML data to said second execution unit (column 35 lines 64 – 67 and column 36 lines 25 – 35, Fernandez); and providing XML data that is transformed to said second execution unit in said canonical form (column 28 lines 1 – 5, Fernandez).

With respect to claims 40 and 43,

Fernandez discloses the method of claim 39, wherein the step of transforming said XML data to said canonical form is performed by said first execution unit (column 6 lines 61 – 67 and column 7 lines 1 – 19, Fernandez).

With respect to claims 41 and 44,

Fernandez discloses the method of claim 40, wherein the step of transforming comprises executing an operator specified in said annotation (column 7 lines 1 – 19, Fernandez).

With respect to claim 45,

Fernandez discloses a database system comprising: a query optimizer that receives a database query, formulates a query plan based on said query, and sends information based on said plan to a first execution unit (Figures 6, 7, Fernandez); wherein formulating a plan includes determining that said first execution unit produces XML data for use by a second execution unit (column 37 lines 48 – 61, Fernandez), and determining whether said first execution unit produces said XML data in a first form that said second execution unit is able to use (column 35 lines 64 – 67 and column 36 lines 25 – 35, Fernandez); said first execution unit that receives said information from said query optimizer and said second execution unit that receives said XML data from said first execution unit (column 28 lines 1 – 5, Fernandez).

With respect to claim 46,

Fernandez discloses the system of claim 45, wherein, if it is determined that said second execution unit is able to use said XML data in said first form, said information that said query optimizer sends to said first execution unit comprises a direction to send said XML data in said first form to said second execution unit (column 6 lines 61 – 67 and column 7 lines 1 – 19, Fernandez); said first execution unit produces XML data in said first form while servicing said query, and sends said XML data to said second execution unit; and said second execution unit receives said XML data in said first form, and services said query based on said XML data in said first form (column 7 lines 1 –

19, Fernandez).

With respect to claim 47,

Fernandez discloses the system of claim 45, wherein, if it is determined that said second execution unit is unable to use said XML data in said first form, said information that said query optimizer sends to said first execution unit comprises transformation information that causes said first execution unit to transform said XML data that is produced by said first execution unit to a second form that said second execution unit is able to use (column 11 lines 31 – 36 and 58 – 64, Fernandez); said first execution unit produces transformed XML data in said second form based on said transformation information while servicing said query, and sends said transformed XML data to said second execution unit (column 12 lines 38 – 59, Fernandez); and said second execution unit receives said transformed XML data in said second form, and services said query based on said transformed XML data column 35 lines 64 – 67 and column 36 lines 25 – 35, Fernandez).

With respect to claim 48,

Fernandez discloses the system of claim 45, wherein said first execution unit and said second execution unit are different execution units that are servicing said request by performing work in parallel (column 18 lines 14 – 24, Fernandez).

With respect to claim 49,

Fernandez discloses the system of claim 45, wherein said first execution unit and said second execution unit are different execution units that are servicing said request by performing work on different servers of a distributed database system (column 18 lines 14 – 24, Fernandez).

With respect to claim 50,

Fernandez discloses a system comprising: means for detecting that a portion of a plan to service a request for data will cause a first execution unit that will perform said portion to generate XML data for use by a second execution unit (Figures 6, 7, column 37 lines 48 – 61, Fernandez); means for generating information to send to said first execution unit to cause said first execution unit to perform said portion of said plan (column 35 lines 64 – 67 and column 36 lines 25 – 35, Fernandez); and means for annotating said information with an annotation that causes XML data generated by said first execution unit to be transformed to a canonical form for use by said second execution unit (column 28 lines 1 – 5, Fernandez).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Navneet

Navneet K. Ahluwalia
Examiner
Art Unit 2166

MOHAMMAD ALI
PRIMARY EXAMINER

Dated: 11/26/2006